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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,064	12/27/2000	Stephen W. Day	D7751	5643

7590

11/20/2003

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EXAMINER

VO. HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/749,064	DAY ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-26, 39, 40 and 57-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-26, 39, 40, 57-84 and 86 is/are allowed.
- 6) ☒ Claim(s) 85, and 87-99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 85, 87-89, and 92-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of Mead et al (US 4,380,253) substantially as set forth in the Office action mailed on 03/13/2003. Applicants argue that there is nothing in Mead suggesting or teaching a reconstruction of the core panel disclosed in Day to arrive at Applicants' fiber reinforced panel as set forth in the claims. The arguments are not found persuasive for the following reasons. Day teaches a reinforced foam core panel comprising the porous rovings being wrapped around each foam pieces forming double layer webs (column 19, lines 46-49). Likewise, it is clearly apparent that the layer of rovings is continuously surrounding each of the strips. Day also teaches the layer of rovings surrounding each strip is adjacent to the layer of rovings of each laterally adjacent the strip and extending over the core surfaces for receiving the skins. Day does not specifically teach that the layer of rovings is **helically wound** onto the foam strip. Therefore, it is necessary and thus obvious for the skilled artisan to look to the prior art for the existence of the layer of rovings helically wound onto the foam trip. Mead, however, teaches a heat insulated hose comprising a layer of fibrous rovings (6A, 6B, 6C) continuously and helically surrounding each

of the foam strips (7A, 7B, 7C) (abstract, figure 3, claim 1) to increase the adhesion of the fiber layer to the foam strips and thereby improving the strength of the hose, which is important to the invention of Day and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a layer of fibrous rovings continuously and helically surrounding each of the strips motivated by the desire to increase the adhesion of the fiber layer to the foam strips, thereby improving the strength of the panel. It is believed that the combination of Day and Mead is sufficient and proper. The combination clearly suggests the fiber reinforced core panel as set forth in claim 85, therefore the art rejections are thus sustained.

With regard to claim 87, Day discloses the thin, porous, fibrous webs being wrapped around each foam pieces forming double layer webs (column 19, lines 46-49). Figures 34-39 of Day shows the reinforcing webs are in a grid-like cellular configuration. Mead teaches a layer of rovings is helically wound onto the foam strip. The combination of Day and Mead would arrive at Applicants' fiber reinforced core panel which includes all the rovings surrounding each strips extend helically in the same angular direction and the rovings on each strip cross the rovings on each laterally adjacent strip.

With regard to claim 88, figure 39 of Day shows the foam strip having a triangular cross-sectional configuration.

With regard to claims 89, 92, and 93, Day teaches the foam strips and surrounding rovings are connected together prior to hardening the resin by skin members overlying the core surfaces (column 4, lines 15-25).

With regard to claim 94, figure 38 of Day reads on the claimed limitations.

With regard to claim 95, figure 36 of Day discloses the skin having an inner layer 407, an outer layer 407 and an adhesive layer 410 between the layers. Day discloses the skin being made of a porous and fibrous material (column 8, lines 8-10).

With regard to claim 96, Day discloses the foam strips formed from polyvinyl chloride (column 2, lines 11-12). The skin member is itself a porous fiberglass fabric (column 8, lines 8-10). It appears that Day is using the same materials to form the foam strips and the skin member as Applicants. It is the examiner's position that the foam strips and skin member would have a color different from those described by Applicants. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

With regard to claim 97, figure 6 of Day shows an internal sheet of fibrous material 42.

With regard to claim 98, figure 36 of Day shows the longitudinally spaced internal transverse reinforcing members extending laterally within each of the strips and to the core surfaces.

With regard to claim 99, figure 1 of Day shows adjacent rovings are spaced from each other.

3. Claims 90 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of Mead et al (US 4,380,253) as applied to claim 41 above, further in view of EP 672 805. Day teaches a plurality of stitched rows of reinforcing struts extending through the webs and between the opposite core surfaces (column 18, lines 5-25 and figure 37). Day does not specifically teach the struts enclosed by the foam strips. EP'805 teaches a panel comprising at least two groups 11 of at least one slender body **12** extending between skin components **3, 4** and through the central core **2** (figure 1, page 3). EP'805 teaches the slender body made of a bundle of fibers and being enclosed by the foam core (pages 5 and 6) to increase the strength of the panel, which is important to the invention of Day and thus suggesting the modification.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form a slender body enclosed by the foam core and extend it through the webs and between the opposite skins of Day motivated by the desire to substantially increase the strength of the panel.

Allowable Subject Matter

4. Claims 22-26, 39, 40, 69-84 are allowed.
5. Claim 86 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations

of the base claim and any intervening claims. The reasons for allowance have been stated in the Office Action mailed on 03/13/2003.

6. Claims 57-84 are allowed. The art rejections over Day in view of EP 672 805 and the double patenting rejections have been overcome by the present amendment and declaration. The amendment to claim 57 that a plurality of rows of reinforcing struts extending through **the webs at locations spaced from the core surfaces** excludes the presence of the loop end portions 14 on the free surface of the skin component of the panel as suggested in EP'805. The declaration states that the structure of amended claim 57 permits the use of very low cost, low strength core material without losing the effective shear resistance of the core panel. The examiner believes that it is an important advantage of the core panel over the prior art.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will


the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on M,T,Th, F, 8:30-6:00 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV


TERREL MORRIS
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